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ABSTRACT

The invention concerns novel compounds used to make specific genetic alterations in the genome of target eukaryotic and prokaryotic cells, methods of their production and use, and kits containing the compounds. The compounds are two-strand duplex oligonucleobase compounds termed binary Hybrid 10 Mutational Vectors (bHMV). A bHMV preferably contains a deoxyribo-type oligonucleobase mutator strand and a ribo-type oligonucleobase targeting strand. A bHMV is constructed to effect changes in a target gene via a combination of gene targeting and mismatch repair between the bHMV and the target gene.